

RECENT OCCURRENCES OF YOUNG *SCHEDOPHILUS OVALIS* (CENTROLOPHIDAE) ALONG FRENCH MEDITERRANEAN COASTS

par

Patrice FRANCOUR & Fabrice JAVEL (1)

RÉSUMÉ. - Observations récentes de jeunes *Schedophilus ovalis* (Centrolophidae) le long des côtes françaises de Méditerranée.

Plusieurs observations récentes en Méditerranée nord-occidentale du rouffe impérial, *Schedophilus ovalis* (Cuvier, 1833), nous permettent de préciser sa distribution le long des côtes françaises méditerranéennes. Malgré une augmentation sensible du nombre d'observations depuis 1995, peut-être en relation avec le réchauffement actuel des eaux, cette espèce reste peu fréquente le long des côtes françaises où seuls de jeunes individus (moins de 30 cm de longueur totale) ont été observés.

Key words. - Centrolophidae - *Schedophilus ovalis* - MED - Corsica - Ligurian Sea - Distribution.

The Centrolophidae includes 27 species worldwide (Fishbase, 2001; <http://www.fishbase.org/>), of which 4 occur in the Mediterranean: *Centrolophus niger* (Gmelin, 1789), *Hyperoglyphe perciformis* (Mitchill, 1818), *Schedophilus medusophagus* Cocco, 1839, and *S. ovalis* (Cuvier, 1833) (Quignard and Tomasini, 2000). *Schedophilus ovalis* is present in the Eastern and Western central Atlantic, Australia, and throughout most of the Mediterranean (Haedrich, 1986, 1990; Fredj and Maurin, 1987; Brito, 1991; Lloris *et al.*, 1991). The northern distribution of *S. ovalis* in the Eastern Atlantic extends to the Bay of Biscay (Quéro *et al.*, 2000). Although reported to occur in South Africa (Haedrich, 1986, 1990), Heemstra (1995) mentions that the species occurring in southern Africa is not *S. ovalis* but *S. velaini* (Sauvage, 1879). As a result of these conflicting reports, Bolch *et al.* (1994) suggested that a revision of the *Schedophilus* genus is needed and should include morphological and electrophoretic analyses of all species.

In northwestern Mediterranean, *S. ovalis* is not frequent and has been reported from the Balearic Islands (De Buen, 1935; Stefanescu and Massutí, 1992; Massutí and Reñones, 1994; Deudero *et al.*, 1999), Corsica (Miniconi, 1989), the Ligurian Sea (Orsi Relini *et al.*, 1990; Relini *et al.*, 1994; Relini, 1995), and the Adriatic (Jardas, 1996 in Dulčić *et al.*, 1999). The only two recent records of *S. ovalis* along the french Mediterranean coasts concern south Corsica: Porto-Vecchio and Lavezzi islands (Miniconi, 1989). We recently gathered several observations of *S. ovalis* in Corsica and in the Alpes-maritimes department: one around an oceanographic buoy about 30 nautical miles offshore, and the other along the coast in shallow waters (Fig. 1).

The reported colour was often uniformly dark grey to brown or with black blotches as described by Orsi Relini *et al.* (1990). The measured sizes of individuals were all less than 30 cm (total length, TL) in shallow water along the coast or offshore, but one was 44 cm TL (fish angling offshore Lérins island; Tab. I); deeper, larger individuals could be fished: 40 to 50 cm TL at 96 m depth (Miniconi, 1989). This size distribution according to depth corre-

sponds to that reported by Orsi Relini *et al.* (1990): 60 to 106 cm TL at depth > 500 m and 25-45 cm TL from the surface to 40 m depth.

Although recent literature and unpublished observations confirm that *Schedophilus ovalis* now occurs regularly in north-western Mediterranean, it is only occasionally observed or fished. Even offshore, around buoys or FADs, *S. ovalis* is not a dominant species in fish assemblages (Orsi-Relini *et al.*, 1990; Massutí and Reñones, 1994; Deudero *et al.*, 1999; Pipitone *et al.*, 2000; Deudero, 2001). However, the number of records (either published or not) have increased steadily since 1995-2000 period (Deudero *et al.*, 1999; Pipitone *et al.*, 2000; Deudero, 2001, and table I).

Dulčić *et al.* (1999) considered that the presence of *S. ovalis* and *S. medusophagus* in the Adriatic is due to water warming. The record of *S. medusophagus* larvae in Adriatic (Dulčić, 1998) and the northward extension of *S. ovalis* to the Bay of Biscay (Quéro *et al.*, 2000) could support this hypothesis. In the same way, we assume that the observations of small to medium sized *S. ovalis* we gathered in 2000-2001 in the Alpes-maritimes department could be explained by the present warming of waters (Francour *et al.*, 1994).

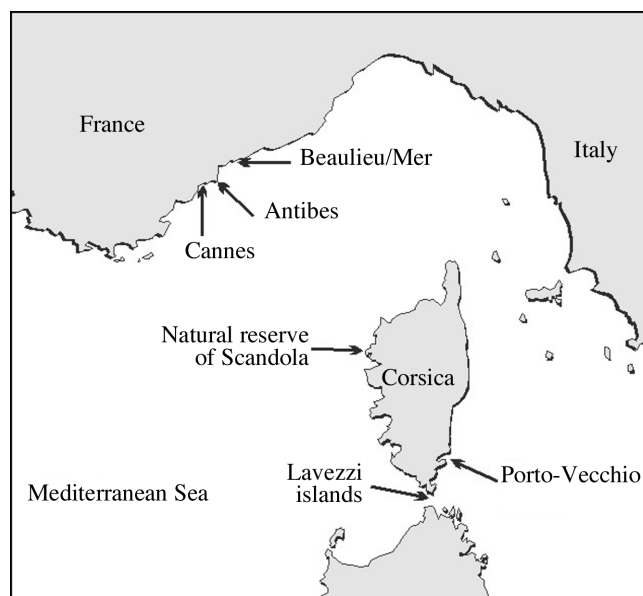


Figure 1. - Recent records of *Schedophilus ovalis* along the French Mediterranean coasts.

(1) Université de Nice-Sophia Antipolis, E.A. 3156, Faculté des Sciences, Parc Valrose, 06108 Nice Cedex 2, FRANCE. [francour@unice.fr]

Table I. - Records of *Schedophilus ovalis* along the French Mediterranean coasts (see Fig. 1). 1: Miniconi (1989 and comm. pers.); 2: Desmier X.; Finelli F.; Francour P.; 3: Géria M.; 4: Ferrero A.; 5: Thibaut T.

Location (Source)	Position	Date	Size (cm)	Habitat, Remarks
Porto-Vecchio, Corsica (1)	41°36'N 9°26'E	1984	40-50	2 individuals fished by trammel net (96 m depth)
Lavezzi Islands, Corsica (1)	41°20'N 9°16'E	1984	30	1 individual spearfished at 1 m depth
Natural Reserve of Scandola, Corsica (2)	42°23'N 8°34'E	1997	27	under floating plastic box; 1 individual
Fish farming cages, Beaulieu-sur-mer (3)	43°42'N 7°21'E	2000	20	under floating buoys; 3 individuals with a brow colour pattern with small black blotches (with small <i>Balistes carolinensis</i>)
Cannes (4)	43°30'N 7°03'E	2000	44	1 individual angling below the sea surface (weight = 2.4 kg)
Antibes-Juan-les-Pins harbour (5)	43°34'N 7°07'E	2000	15	underwater observation along a dike of 1 individual

REFERENCES

- BOLCH C.J.S., WARD R.D. & P.R. LAST, 1994. - Biochemical systematics of the marine fish family Centrolophidae (Teleostei: Stromateoidei) from Australian waters. *Austr. J. mar. Freshw. Res.*, 45: 1157-1172.
- BRITO A., 1991. - Catalogo de los Peces de las Islas Canarias. 230 p. La Laguna: Francisco Lemus.
- DE BUEN F., 1935. - Fauna ictiológica. Catálogo de los peces ibéricos: de la planicie continental, aguas dulces, pelágicos y de los abismos próximos. Segunda parte. *Notas Resum. Inst. Esp. Oceanogr.*, ser. II, 89: 91-143.
- DEUDERO S., 2001. - Interspecific trophic relationships among pelagic fish species underneath FADs. *J. Fish Biol.*, 58: 53-67.
- DEUDERO S., MERELLA P., MORALES-NIN B., MASSUTÍ E. & F. ALEMANY, 1999. - Fish communities associated with FADs. *Sci. Mar.*, 63: 199-207.
- DULČIĆ J., 1998. - *Schedophilus medusophagus* (Pisces: Centrolophidae) larvae from the Adriatic Sea. *J. Mar. Biol. Ass. U.K.*, 78: 1035-1038.
- DULČIĆ J., GRBEC B. & L. LIPEJ, 1999. - Information on the Adriatic ichthyofauna - Effect of the water warming ? *Acta Adriat.*, 40: 33-43.
- FRANCOUR P., BOUDOURESQUE C.F., HARMELIN J.G., HARMELIN-VIVIEN M. & J.P. QUIGNARD, 1994. - Are the Mediterranean waters becoming warmer ? Information from biological indicators. *Mar. Poll. Bull.*, 28: 523-526.
- FREDJ G. & C. MAURIN, 1987. - Les poissons de la banque de données Médifaune. Application à l'étude des caractéristiques de la faune ichtyologique méditerranéenne. *Cybum*, 11: 218-299.
- HAEDRICH R.L., 1986. - Centrolophidae. In: *Fishes of the North-Eastern Atlantic and the Mediterranean* (Whitehead P.J.P., Bauchot M.-L., Hureau J.-C., Nielsen J. & E. Tortonese, eds), pp. 1177-1182. Paris: UNESCO.
- HAEDRICH R.L., 1990. - Centrolophidae. In: *Check-List of the Fishes of the Eastern tropical Atlantic* (Quéro J.-C., Hureau J.-C., Karrer C., Post A. & L. Saldanha, eds), pp. 1010-1013. Paris: UNESCO.
- HEEMSTRA P.C., 1995. - Additions and corrections for the 1995 impression. In: *Revised Edition of Smiths' Sea Fishes*, pp. v-xv. Berlin: Springer-Verlag.
- LLORIS D., RUCABADO J. & H. FIGUEROA, 1991. - Biogeography of the macaronesian ichthyofauna (The Azores, Madeira, The Canary Islands, Cape Verde and the African enclave). *Bul. Mus. Mun. Funchal*, 43: 191-241.
- MASSUTÍ E. & O. REÑONES, 1994. - Observaciones sobre la comunidad de peces pelagicos asociados a objetos flotantes en aguas oceanicas de Mallorca. *Bol. Inst. esp. Oceanogr.*, 10: 81-93.
- MINICONI R., 1989. - Les poissons et la pêche en Corse. Thèse Université, 504 p. Univ. Aix-Marseille II.
- ORSI-RELINI L., FIDA B. & M. RELINI, 1990. - Notes about *Schedophilus ovalis* (Osteichthyes, Centrolophidae) in the Ligurian sea. *Rapp. P.V. Comm. Internat. Explor. Sci. Mer Médit.*, 32: 272.
- PIPITONE C., ANDALORO F., CAMPAGNUOLO S., ROMANELLI M. & A. POTOSCHI, 2000. - Trophic relationships between some FADs associated fishes. In: *Tuna Fishing and Fish Aggregating Devices*, pp. 679. Brest: Ifremer.
- QUÉRO J.C., DU BUIT M.H., LABORDE J.L. & J.J. VAYNE, 2000. - Observations ichtyologiques effectuées en 1999. *Ann. Soc. Sci. nat. Charente-Marit.*, 8: 1039-1045.
- QUIGNARD J.P. & J.A. TOMASINI, 2000. - Mediterranean fish biodiversity. *Biol. Mar. Médit.*, 7: 1-66.
- RELINI G., 1995. - La fauna ittica batiale del Mediterraneo con particolare riferimento ai campionamenti dello strascio. *Biol. Mar. Médit.*, 2: 177-183.
- RELINI M., ORSI-RELINI L. & G. RELINI, 1994. - An offshore buoy as a FAD in the Mediterranean. *Bull. Mar. Sci.*, 55: 1099-1105.
- STEFANESCU C. & E. MASSUTÍ, 1992. - Segunda cita de *Schedophilus ovalis* (Cuvier & Valenciennes, 1833) (Osteichthyes, Centrolophidae) para el Mar Catalan (Mediterraneo NO). *Misc. Zool.*, 16: 240-242.

Reçu le 03 septembre 2002.

Accepté pour publication le 08 novembre 2002.